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REMARKS/ARGUMENTS

Claims 1-12 are pending in this application.

Claims 1-9 were rejected under 35 U.S.C. § 102(a) as being anticipated by Wajima (U.S. 6,232,699). Claims 10-12 were rejected under 35 USC § 103(a) as being unpatentable over Wajima. Applicants respectfully traverse the prior art rejections of claims 1-12.

Claim 1 recites:

"An energy trap piezoelectric resonator component utilizing third overtone of a thickness longitudinal vibration, comprising:

a piezoelectric substrate having first and second major surfaces and polarized in a direction of thickness between the first and second major surfaces;

a first vibrating electrode disposed on a portion of the first major surface of the piezoelectric substrate; and

a second vibrating electrode disposed on a portion of the second major surface of the piezoelectric substrate and facing the first vibrating electrode with the piezoelectric substrate interposed therebetween; wherein

each of the first and second vibrating electrodes has a substantially elliptical shape, and wherein a flattening ratio a/b is within a range of about 1.2 to about 1.45, where a represents the major axis diameter of the substantially elliptical shape and b represents the minor axis diameter of the substantially elliptical shape; and

first and second casing substrates respectively laminated on top and bottom surfaces of the piezoelectric substrate, wherein vibrating cavities are provided between the first vibrating electrode and the first casing substrate and between the second vibrating electrode and the second casing substrate." (emphasis added)

With the unique combination and arrangement of elements recited in Applicants' claim 1, including the feature of "each of the first and second vibrating electrodes has a substantially elliptical shape, and wherein a flattening ratio a/b is within a range of about 1.2 to about 1.45, where a represents the major axis diameter of the substantially elliptical shape and b represents the minor axis diameter of the substantially elliptical

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shape," Applicants have been able to provide a compact energy trap type piezoelectric resonator component which not only effectively suppresses the fundamental wave of a thickness longitudinal vibration functioning as a spurious wave in the use of a third overtone of the thickness longitudinal vibration, but also easily achieves desired resonance characteristics with few, if any, limitations on the area of an electrode and the dimensions of a piezoelectric substrate (see, for example, the third full paragraph on page 3 of the originally filed specification).

The Examiner alleged that Wajima et al. teaches each and every feature recited in Applicants' claim 1, including the feature of "each of the first and second vibrating electrodes has a substantially elliptical shape, and wherein a flattening ratio a/b is within a range of about 1.2 to about 1.45, where a represents the major axis diameter of the substantially elliptical shape and b represents the minor axis diameter of the substantially elliptical shape." The Examiner specifically alleged that Fig. 12A of Wajima et al. teaches that "a flattening ratio (a/b) represents the major axis diameter of the substantially elliptical shape electrode. Wherein, (A) represents the major axis and (B) represents the minor axis diameter of the substantially elliptical shape electrode." Applicants strenuously disagree.

Contrary to the Examiner's allegations, "a" and "b" of Wajima do not represent major and minor axis dimensions of a substantially elliptical shape electrode. As clearly shown in Fig. 12A and disclosed in col. 10, lines 25-37 of Wajima, "a" represents a major (or minor) dimension of the resonance electrode 3 that is disposed on one surface of the substrate 2, and "b" represents a major (or minor) dimension of the resonance electrode 4 disposed on the opposite surface of the substrate 2. Thus, the ratio "a/b" disclosed in Wajima is the ratio of a dimension (major or minor) of one resonance electrode 3 to the same dimension (major or minor) of another resonance electrode 4.

Wajima teaches absolutely nothing at all about the ratio of a major dimension to a minor dimension of a single electrode. Therefore, Wajima certainly fails to teach or

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suggest the feature of "each of the first and second vibrating electrodes has a substantially elliptical shape, and wherein a flattening ratio a/b is within a range of about 1.2 to about 1.45, where a represents the major axis diameter of the substantially elliptical shape and b represents the minor axis diameter of the substantially elliptical shape" as recited in Applicants' claim 1.

Accordingly, Applicants respectfully submit that Wajima fails to teach or suggest the unique combination and arrangement of elements recited in Applicants' claim 1.

In view of the foregoing remarks, Applicants respectfully submit that claim 1 is allowable. Claims 2-12 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicants petition the Commissioner for a Two-month extension of time, extending to February 22, 2005, the period for response to the Office Action dated September 22, 2004.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: February 15, 2005


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